

Common Disorders of Foot and Ankle

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Topics To Cover

- Hallux valgus
- Plantar fasciitis
- Metatarsalgia
- Achilles tendinitis

Hallux Valgus



Hallux Valgus

- Definition → the big toe's long axis is laterally deviated from the foot's long axis
- F > M
- It's a common deformity
- Types:
 - Adolescent
 - Adult → commonest
 - Geriatric

Hallux Valgus- Causes

- Familial → > 60%
- 2 – 4 % of the population has it
- Wearing shoes
- Shoes:
 - High heels, or
 - Pointed front
- Metatarsus primus varus:
 - Congenital, or
 - Geriatric
- Rheumatoid arthritis

Hallux Valgus- Presenting Complain

- Appearance / Deformity
- Issues in wearing shoes
- Pain → over the bunion, forefoot

Hallux Valgus- Clinical Picture

- Big toe Lat deviation (valgus)
- 1st metatarsal varus deformity
- 1st metatarsal head (Bunion):
 - Subluxation
 - Internal rotation
- ± inflamed overlying bursa
- Over riding toes
- Hammer toes
- Nail issues
- Pes plano-valgus
- Metatarsus rigidus
- Bunion ulceration & recurrent infection



Hallux Valgus- Radiology

- XR views:
 - AP standing (the normal angles are):
 - Inter metatarsal angle $\rightarrow < 9^\circ$
 - Valgus 1st toe angle $\rightarrow < 15^\circ$
 - Lat standing
 - Oblique



Hallux Valgus- Treatment

- General:
 - Rest
 - Elevation
 - Cold/ice compressions
 - Analgesia → oral & gel
 - Changes in shoe wear
 - Activity modifications

Hallux Valgus- Treatment

- Adolescent:
 - C/O → cosmetic
 - Wise to try conservative 1st (to delay the surgery):
 - Shoes → wide fronts, no high heels
 - Spacer splints
 - Surgery → mainly soft tissue balancing



Hallux Valgus- Treatment

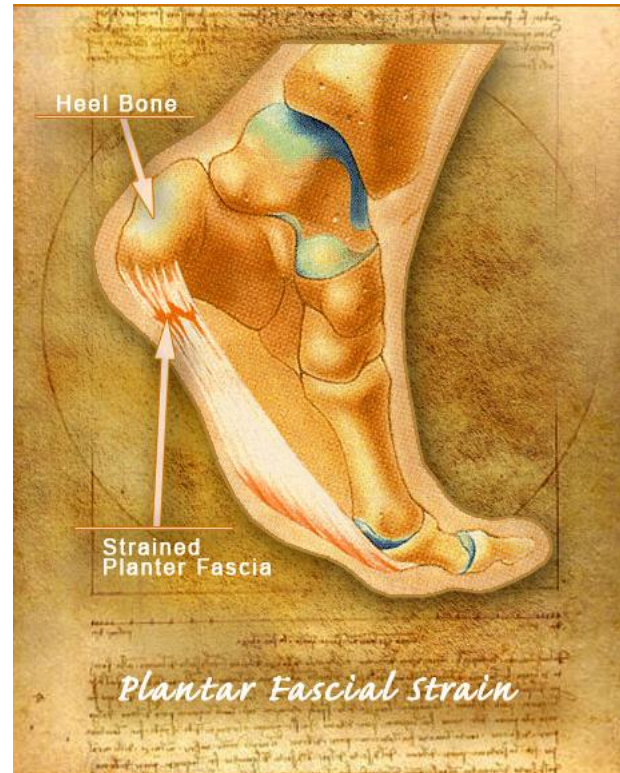
- Adult:
 - Surgery usually → soft tissue & bone
 - There are multiple types of op's, which to chooses depends on:
 - Level of the deformity, and
 - Degree of deformity
 - Aim:
 - Realign the 1st metatarsal, and
 - Soft tissue balancing



Hallux Valgus- Complications

- Of H.V:
 - Shoes issues
 - Recurrent bunion inflammation
 - If D.M bunion infection or ulceration
 - Transfer metatarsalgia (disturbed mechanics)
- Of H.V surgery:
 - Infection (superficial or deep)
 - Implant failure
 - Recurrence

Plantar Fasciitis



Plantar Fasciitis

- Definition → inflammation of the plantar fascia
- Its painful & sometimes disabling
- In the posterior 2/3 of the foot



Plantar Fasciitis- Causes

- Insidious (not clear H/O an incident)
- Some times:
 - Increased sport
 - Change of footwear
 - Change of walking surface
 - Gain of weight (pregnancy, obese)
 - Prolonged standing
 - Connective tissue disorders (as D.M, Gout, ...)

Plantar Fasciitis- Pathology

- Repetitive micro injuries → inflammatory process → micro tears → small hematomas → can heal with some calcifications
- May tight A.T

Plantar Fasciitis- Clinical Picture

It Is A Clinical Diagnosis

Plantar Fasciitis- Symptoms

- Gradual onset
- “Start-up Pain”:
 - Wake up in the morning
 - After sitting for some time
- Walk on lat border of the foot
- Pain:
 - Pins and needles, or sharp, or persistent aches
 - At hind & mid foot area
 - Improves with:
 - Walking for sometime
 - Elevation
 - NSAID

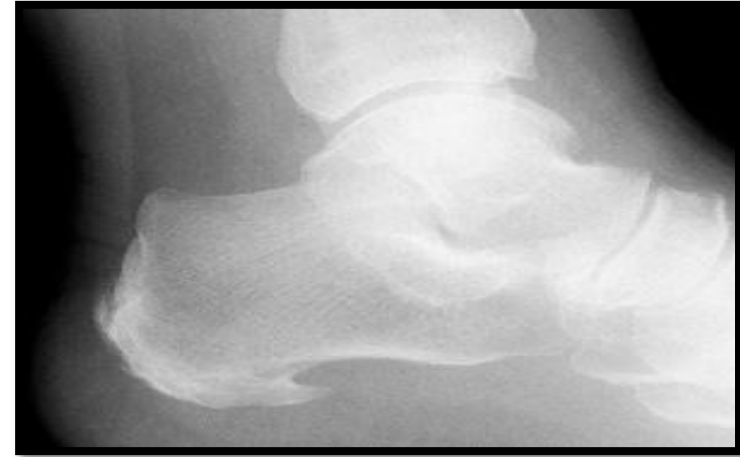
Planter Facsiitis- Signs

- Look →
- Feel →
 - Boney prominences: none specific
 - Planter fascia origin: tender
- Move →
 - Within normal, or
 - Pain at the end of the motion, esp. dorsi-flexion
 - May mid foot stiffness
- Special test → Positive “Trigger Sign”

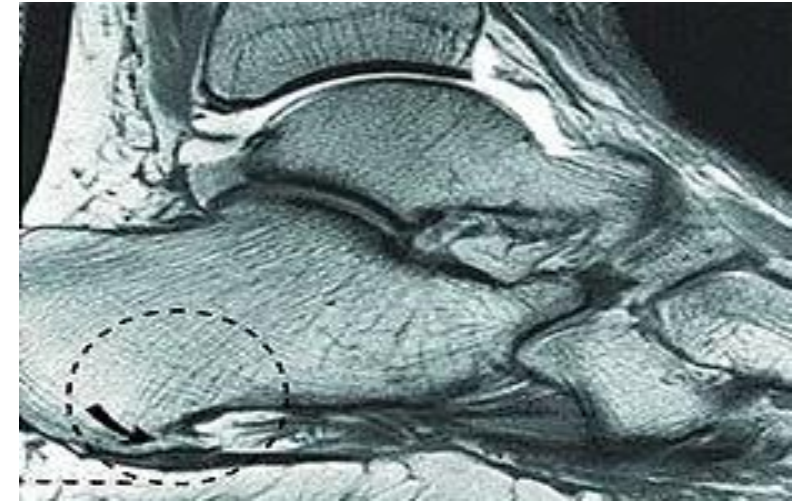
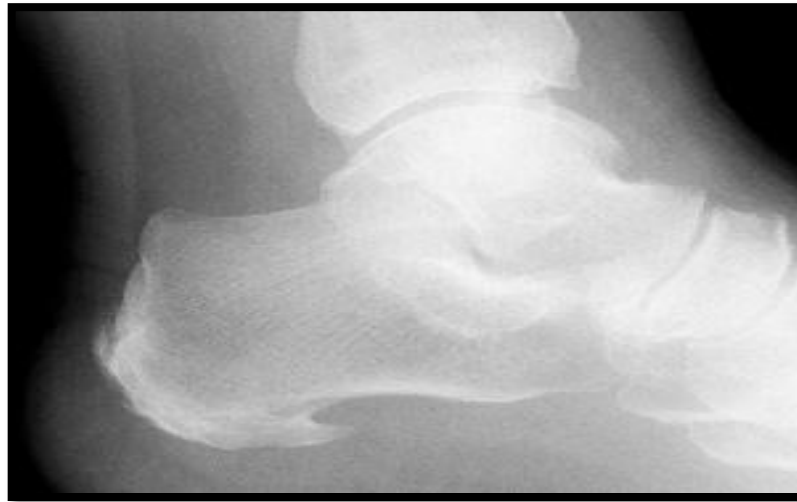


Plantar Fasciitis- Radiology

- “Calcaneal Spur” on XR:
 - It’s a result **NOT** the cause
 - Implies chronicity
 - Not diagnostic
- Rarely need → U/S, MRI



Planter Facsiitis



Plantar Fasciitis- D.D

- Painful Fat Pad:
 - Due → trauma (eg: fall from height)
 - Patho → pad separation & a hematoma → with time fat atrophy
 - Rx → as P.F, except for warm baths
- Tarsal Tunnel Syndrome:
 - ***After*** a sporting activity
 - Difficult to D.D from P.F
 - Rx → 1st conservative, if no improvement release the retinaculum
- Neuroma of → Lat plantar nerve
- Stress # → calcaneal
- O.A of small foot joints

Plantar Fasciitis- Treatment

- Know the cause & Rx
- Patient-directed
- It's a recurring condition

Plantar Fasciitis- Treatment

- Rest
- When sleeps → elevated L.L's 1-2 pillows
- When wake-up → wear a thick sponge slipper
- Proper shoes
- Heel-cushions (doughnuts) → in/out home
- Analgesia → P.O & local gel
- Ice compressions
- P.T:
 - At a center
 - And home → stretching & massaging
- Do ALL together
- Lose body weight



C-Gelpacs can be frozen



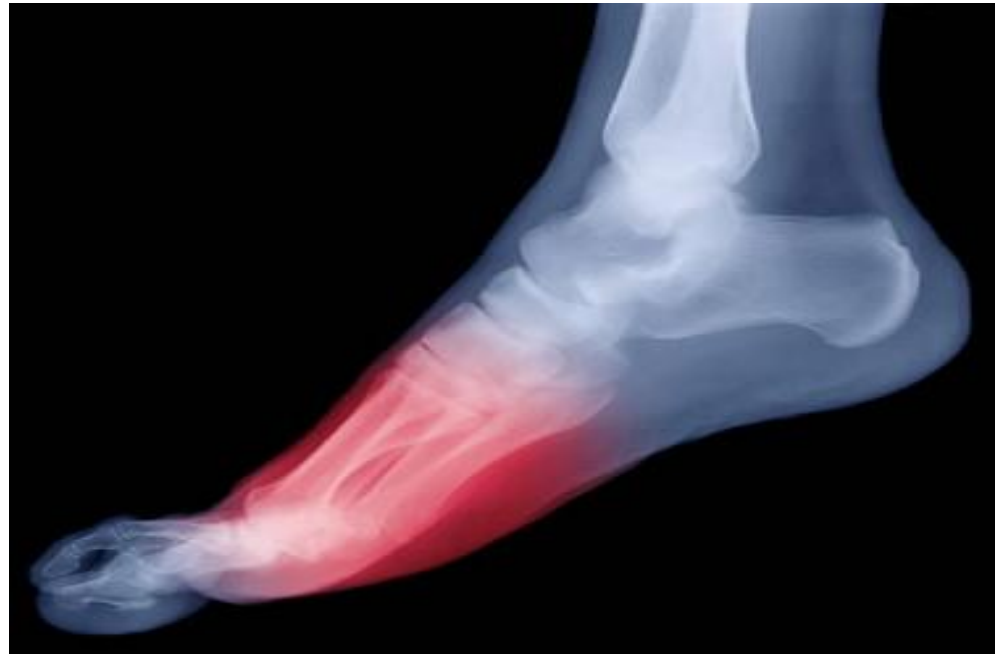
Plantar Fasciitis- Treatment

- If all previous conservative fails → injection of:
 - Local anesthesia & steroid (care of its complications)
 - At the medial trigger point
- Surgery:
 - Last resort
 - For planter fascia origin
 - **NEVER** for the spur



Nice to Know

Metatarsalgia



Metatarsalgia- Symptoms

- Pain → anterior 1/3 of the sole.
- Under surface of → ≥ 1 of metatarsal heads.
- At → 2nd - 4th metatarsal heads.
- They feel as if there is a small object under the PMJ area(s) with every step.
- O/E → tenderness under metatarsal heads.



Metatarsalgia- Treatment

- Rest.
- Elevation.
- Cold/ice compressions.
- Analgesia → oral & gel.
- Lose weight.
- Physiotherapy → wax, U/S.
- Metatarsal pads in a proper home shoe.



Achilles Tendinitis



Achilles Tendinitis- Causes

- Prolonged walking or standing.
- Sports.



Achilles Tendinitis- Causes

- Prolonged walking or standing.
- Sports.
- Shoes:
 - High heels for long times
 - Narrow front shoes.



Achilles Tendinitis- Clinical Picture

- Posterior leg pains.
- Pain is worst:
 - Getting up from sleep in the morning.
 - It gradually improves throughout the day.
 - After a prolonged periods of inactivity/activity.
- Difficulty in planter flexion of the ankle.
- Tenderness:
 - Over the gastrocnemius muscle.
 - Achilles tendon.
- Some swelling over the tendon.

Achilles Tendinitis- Workup

- It is a clinical diagnosis.
- XR → can show calcification around the tendon.
- U/S → some effusion around the tendon.



Achilles Tendinitis- Treatment

- Rest.
- Elevation.
- Cold/ice compressions.
- Analgesia → oral & gel.
- Physiotherapy → stretch the tendon.
- Heel pads in proper home shoe to rest the tendon.
- If no improvement → below knee cast with the foot in equinus, for 3-6w

Silicone Heel Lifts



***Achilles tendon pain should be treated
due to the danger of the tendon can become weak, frayed,
and eventually may rupture***

Any Question ?

Remember

Take Home Message

- Both of the foot disorders are really common
- Conservative RX is still 1st line of management, except for adult moderate to severe hallux valgus
- Best thing for hallux valgus is prevention → by proper shoes education
- In plantar fasciitis patient education is a must

Objectives

- Plantar fasciitis & Hallux valgus:
 - Definition
 - Patho-anatomy
 - Causes
 - Clinical picture
 - Radiological assessments
 - Treatments